in the costs of production, and consequent difference in prices is left to the field of individual initiative in styling of the product, in intelligent service, and in the field of management.

Standards Relating to Product. Among the Trade Practices are certain specifications relating to the description of the product. Standardization of terminology, of trade marks and labels, of statements of quality and productive processing are provided.

6. Standards Relating to Finance. "No member of the industry shall self merchandise in the regular course of trade below his cost." The code does not provide for any form of sprice-fixing, but it' does establish a technique of pricing—a technique based upon costs.

Through the standards established, the handkerchief industry has provided its members with a basis of understanding—a basis necessary to co-operative effort. Purposes, policies, methods, conditions, and facilities have been formulated. Known factors have replaced those of chance, and within the stabilized environment, each member now has a greater security upon which calculations and plans may be made.

The standards which have been made effective are insufficient. however, ato meet the requirements of progressive stabilization. As existing knowledge is incomplete, research becomes essential. Managerial problems depend upon research for their solutions on the Code provides for research, investigation and experiment. Analyses, measurements and comparisons are a prescribed function of the Code Authority. This research, in which the Code Authority is to be engaged, serves not only the purpose of solving industrial problems, but also checks and currently examines the formulated standards. Purposeful effort remains progressive effort so long as the standards are free from rusting

The fields of study in which research is to be conducted correspond to the classes of standards that have been adopted, with some additions. In fact, much of the research concerns trade practices which the industry desired to establish but the details of which could not be "thrashed out" in time for their adoption in the Code.

1. Research Relating to Members of Industry. The Code Authority shall "study the problem of home work in this industry and recommend to the Administrator appropriate means for its effective regulation and control." In particular, studies are to be made on the manufacture and processing of handker-chiefs on which the labor cost of the hand operation is equal to 60 per cent or more, of the total labor cost of the finished handkerchief and where the wholesale price of such handker-chiefs is not less than \$3.50 per dozen. This latter study deals with a specific case, involving a small number of people, and a small amount of product in California, Texas and New Mexico. It was felt, pending further study, that the industry would not be justified in legislating this small sector out of business without adequate study and an opportunity for the sector to prove its right to existence.

2. Research at the Work Place. Hours worked by machines are reported to the Code Authority.

3. Personnel Research. Reports received by the Code Authority cover the number laid off, bired, and on part time. As the characteristic method of wage payment is the piece rate, provision is made for the current filing of piece rates, which makes them subject to constant revision. Also, the Code Authority is to examine currently the differentials between geographical divisions and between able-bodied and handicapped workers. These differentials are in the Code on an experimental basis.

4. Marketing Research. In the fields of marketing and merchandising research is to be conducted on the problems relating to the shipment of goods on consignment or memorandum. "the abuse of buying power to force uneconomic or unjust terms

or conditions of sale upon sellers, and the abuse of selling power to force uneconomic or unjust terms of sale upon buyers; the offering for sale of any merchandise under any trade mark, slogan . . . in unfair imitation of trade mark, name or slogan . . . " of a competitor: "procuring, or attempting to procure, any information concerning the business of a person which is properly regarded by such person as a trade secret or confidential within its organization."

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5. Product Research. The Code commands the Code Authority to conduct research into two subjects relating to the product. Appropriate facilities have been lacking for the registration of new and original styles, designs and patterns. The Code Authority will endeavor to devise suitable facilities. The second piece of product research called for by the Code is in the use of colors and dyes.

6. Research Relating to Finance. In order to enforce the standards specifying that no handkerchiefs shall be sold below their cost of production, it becomes necessary to devise standard methods for cost keeping. The Code Authority is responsible for establishing a uniform accounting system for each division or sub-division of the industry. "Any member of the industry shall have the privilege of continuing any cost system now in use or of instituting a new cost system suitable and adapted to his particular needs, provided that the selling price arrived at by the use of any such system shall not be less than the cost of that particular article which would be arrived at by the use of the uniform cost system" This provision is intended to accomplish the purposes of an absolutely uniform cost accounting system without compelling individual members to upset their present systems, in case the present system reaches the same results that would be reached by the uniform cost accounting

. 7. Research in General Administration. Studies are also to be made in the state and tendency of industry generally and related industries as well as in the particular industry and the particular enterprises. Upon the industry is placed the responsibility for observing the degree of foreign competition. Many of you will respond that American industry has always been alert in discovering foreign competition and in making the discoveries known in the halls of Congress. But this de facto responsibility now becomes a de jure responsibility. Students of government have held that the lobby is an integral part of our legislative machinery, and should be officially recognized as such. Is this not a step in that direction? The Code states that the Authority shall have the responsibility of recommending "to the proper authority, should the provision of this Code so increase the cost of domestic manufacture as to greatly increase the proportion of foreign imports and impair the competitive ability of domestic manufacturers operating under this Code, such tariff and other regulations as will maintain the normal competitive relationship between domestic and foreign manufactures."

In the second place, it is the duty of the Authority to keep informed as to the Code situations and conditions in related industries. The Authority must watch the relations with outside industries.

These are the prescribed researches, but they are the minima. Broad powers remain; namely, "to obtain from time to time from members of the industry reports in such form and at such times, in respect to wages, hours of labor, conditions of employment, number of employes, and other matters pertinent to the purposes of this Code; to make surveys, compile reports, collect statistics and trade information, make recommendations for the betterment of the industry, investigate unfair trade practices, consider proposals for amendments to this Code, and otherwise act for the benefit of the industry." One may well carefully note these provisions for far-reaching future data concarefully note these provisions for far-reaching future data con-

cerning the industry to be made available to the Code Authority and to the Administrator.

In addition to the reports dealing with personnel as stated, the Code Authority has already decided the industry shall report on production, purchase commitments, orders unfilled at the end of stated periods

It does seem that in this industry we are witnessing a real change of attitude from the abstract concept of planning to the concrete application of planning technique. In these researches the basis has been laid for the development of an industry planning unit. The constant study of comparative piece rates, hours of machine operation, production, costs, quality of product, orders and commitments may well lead to an industry research bureau with far-reaching influence in standardizing equipments, processes, methods of work, rates, and flow of work.

The third principle of Scientific Management is that of control. To secure the most economic and most effective realization of the purpose and the correlation of activities, management must have continuous control of the work of individuals. Defined standards are ineffective unless there is established a systematic procedure which directs the researches, initiates and mainrains the standards. Only then may the common objective be achieved with a minimum of waste of human and material energies. Control automatically accompanies the observance of standards, but there must be observance. Throughout the Code there are such phrases as, "upon the express approval of the Administrator," "unless ordered by the Administrator," "the Administrator may prescribe." "subject to the right of the Administrator." These phrases have not been used accidentally. The frequent repetition of such phrases results from the recognition of the fact that self-government of an industry requires a strong neutral authority who will serve the interest of the owner of the business, labor, and of the community. Industry may define the standards, but industry alone may not enforce their observance. The handkerchief industry welcomes such a stabilizing force and has already in its brief experience found that it is constructive, helpful and necessary.

The Code actually states: "To further effectuate the purposes of the Act. a Code Authority is hereby set up to co-operate with the Administrator in the administration of this Code. This Code Authority shall consist of nine members or such other members as may be approved from time to time by the Administrator. . . Nine members shall be appointed by the Board of Directors of the Handkerchief Industry Association, Inc., and the Administrator, in discretion, may appoint additional members to represent the Administrator or such groups or interests as may be agreed upon." Note that the Administrator has the power to appoint additional members, with a vote. The Administrator has already appointed two such members on the Code Authority. The fact that Miss Rose Schneidermanknown by you as one of the strong, creative characters of the labor movement, distinguished by her balance between unyielding interest in the status of labor and a rational perception of management problems-has been appointed as a representative of the Administrator indicates the serious intent of this provision. This appointment has been doubly welcomed by the Code Authority and approved by the industry at large.

The industry has been organized for strong administration by the Code Authority, and the Administrator has far-reaching ultimate authority. In its internal organization, a basic distinction has been made between planning and execution. The staff of the authority is engaged in planning and collecting of data: the Authority is engaged in determination of policies execution and enforcement.

In order to obtain information, the Code provides that the Authority select a Confidential Agency. The Agency "obtains

from all members of the industry certified reports of such character and in such form as the Code Authority may prescribe. The Agency shall be in no way engaged in the industry or connected with any member thereof. All information received shall be held as secret and confidential between the Agency and the reporting member. The Agency shall analyze, consolidate, and digest the reports and shall disclose to the Code Authority only the general findings." The reason for the Confidential Agency is to secure the assembly of data for research and for reports on the observation of established standards without the members of a competitive industry knowing the detailed figures and to whom they pertain. A well-known firm of certified public accountants, of high repute, has been chosen as the Confidential Agency. Certified public accountants are particularly suited to this function for, obviously, the agent must be an inspector of cost systems and secondly, business men are accustomed to opening their books to accountants.

The power given to the Code Authority and to the Administrator will be the supreme test of an industry's capacity for self-government; of the character, vision and strength of its members

Our analysis of the Code has returned us to the original proposition of this paper: co-operation will be promoted as research is conducted, as the results of research are formulated into standards. In the application of these principles understanding will be created. This co-operation will not be merely a reporting of observed infringements, but the understanding and acceptance of the common purpose and the performance of complementary responsibilities.

There is a final proposition we would leave with you. The administration of this Code will not only extend the application of Scientific Management from the individual enterprise to the plane of national industry, but also will extend Scientific Management within individual enterprises. By limiting the area of competition to the sector of managerial efficiency, the scientifically managed enterprise can realize its potentialities.

Paper presented to a meeting of the Taylor Society, New York December 8, 1933.

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capacity the country can potentially enjoy. All of us know that minimum salaries of what is today represented by thirteen dollars worth of buying power are not going to create and maintain a mass buying power sufficient to give us real prosperity. A part of the revolution taking place should be an attempt to put the average man and woman of a not-far-distant tomorrow in a condition of living comparable to that of the average business man of today in point of buying power. Similarly, just as the average business man is now theoretically entitled to credit based upon his future ability to earn and repay, so should the status of the average employe eventually be placed on a footing so that he too may be in a position to get and give his full share of the promised New Deal through the use of credit. The benefits of this, if intelligently and liberally used, few of us as yet appreciate. We must remember that practically every state of prosperity we have had has been a war prosperity. because war promoted a liberal use of credit. We must learn the technique of making credit available in large amounts without a war, without feeding, clothing, housing and caring for the individual so that he may destroy and die, but rather so that he may build and live.

Addresses delivered before a meeting of the Taylor Society, New York, December 6, 1933.